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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,338	11/07/2006	Nicholas Robert Harris	CPAGE.00015	7125
22858	7590	12/09/2009		
CARSTENS & CAHOON, LLP P O BOX 802334 DALLAS, TX 75380			EXAMINER MULLINS, BURTON S	
			ART UNIT 2834	PAPER NUMBER
			MAIL DATE 12/09/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/599,338	<b>Applicant(s)</b> HARRIS ET AL.	
	<b>Examiner</b> BURTON MULLINS	<b>Art Unit</b> 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-4, 6-23 and 25-31 is/are pending in the application.
- 4a) Of the above claim(s) 11-23 and 25-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2, 8-10 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. The indicated allowability of claim 2 is withdrawn in view of the newly discovered reference to Cage. Rejections based on the newly cited reference follow.

### ***Claim Rejections - 35 USC § 102***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 2 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Cage (US 5,193,391). Cage teaches an electromagnetic generator (angular rate output signals generated) comprising two magnets 15, 16 and a coil 26 disposed therebetween (Figs.1&11), the two magnets being configured to define therebetween a region of magnetic flux in which the coil is disposed whereby relative movement between the coil and the magnets generates an electrical current in the coil (c.11:10-30), and a vibratable first mount (tynes 3&4) for each of the magnets 15, 16 and a vibratable second mount (PC board 30) for the coil 26 (Fig.1) whereby each of the at least two magnets and the coil are respectively vibratable about a respective central position (i.e., tyne/magnets 15/16 about X'- and Y'-directions, c.15:23-40; PC board/coil 26 about X- or Y-directions, c.11:5-10), wherein the vibratable first mount and the vibratable second mount are adapted to vibrate out of phase when excited to vibrate by a common input of vibration energy (due to the different structures of tyne 3&4 supporting magnets 15&16 and PC board 30 supporting coil 26, when the device is mechanically vibrated by reaction forces, the resonant frequencies of the structures will differ and tyne/magnets will vibrate out of phase from the

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board/coil), so that the coil 26 and its respective magnets 15&16 vibrate out of phase with each other (due to differing vibration modes or resonant frequencies).

Regarding claim 8, Cage teaches that each of the vibratable first mount and the vibratable second mount are mounted on a common base (i.e., tynes 3&4 and PC board 30 are connected to a common base 1, the latter by means of cylindrical case 2; Fig.1).

Regarding claim 9, each of the vibratable first mount and the vibratable second mount are “integral” with the common base in that tynes 3&4 and PC board 30 are mechanically connected to a common base 1, the latter by means of cylindrical case 2 (Fig.1).

Regarding claim 10, the two magnets 15, 16 and the coil 26 are mounted along a common axis, parallel to the Y' direction (Figs.1&11).

#### ***Allowable Subject Matter***

4. Claims 3-4 and 6-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Regarding claim 3, while Cage teaches that the first and second mounts vibrate out of phase, there is no specific teaching that “the vibratable first mount and the vibratable second mount are adapted to vibrate substantially in anti-phase when excited to vibrate by a common input of vibration energy, so that the coil and its respective magnets vibrate substantially in anti-phase with each other.” Regarding claim 4, the prior art does not teach that “each of the vibratable first mount and the vibratable second mount comprises a cantilever beam, and the cantilever beam of each vibratable first mount has substantially one half of the mass of the cantilever beam of the vibratable second mount.”

***Drawings***

5. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BURTON MULLINS whose telephone number is (571)272-2029. The examiner can normally be reached on 9-5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Q.Leung can be reached on (571)272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BURTON MULLINS/  
Primary Examiner, Art Unit 2834

bsm  
07 December 2009